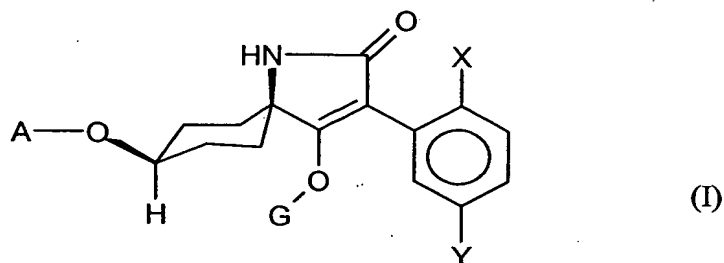


Patent Claims

1. Compounds of the formula (I)



in which

X represents alkyl, halogen, alkoxy, haloalkyl or haloalkoxy,

Y represents hydrogen, alkyl, alkoxy, halogen, haloalkyl or haloalkoxy,

where only one of the radicals X and Y may represent haloalkyl or haloalkoxy,

A represents C₁-C₆-alkyl,

G represents hydrogen (a) or represents one of the groups



in which

M represents oxygen or sulphur,

R¹ represents in each case optionally halogen-substituted C₁-C₂₀-alkyl, C₂-C₂₀-alkenyl, C₁-C₈-alkoxy-C₁-C₈-alkyl, C₁-C₈-alkylthio-C₁-C₈-alkyl or poly-C₁-C₈-alkoxy-C₁-C₈-alkyl or represents optionally halogen-, C₁-C₆-alkyl- or C₁-C₆-alkoxy-substituted C₃-C₈-cycloalkyl in which optionally one or two not directly adjacent methylene groups are replaced by oxygen and/or sulphur,

represents optionally halogen-, cyano-, nitro-, C₁-C₆-alkyl-, C₁-C₆-alkoxy-, C₁-C₆-haloalkyl-, C₁-C₆-haloalkoxy-, C₁-C₆-alkylthio- or C₁-C₆-alkylsulphonyl-substituted phenyl or represents thienyl,

R² represents in each case optionally halogen-substituted C₁-C₂₀-alkyl, C₂-C₂₀-alkenyl, C₁-C₈-alkoxy-C₂-C₈-alkyl or poly-C₁-C₈-alkoxy-C₂-C₈-alkyl,

represents optionally halogen-, C₁-C₆-alkyl- or C₁-C₆-alkoxy-substituted C₃-C₈-cycloalkyl or

represents in each case optionally halogen-, cyano-, nitro-, C₁-C₆-alkyl-, C₁-C₆-alkoxy-, C₁-C₆-haloalkyl- or C₁-C₆-haloalkoxy-substituted phenyl or benzyl.

2. Compounds of the formula (I) according to Claim 1 in which

X represents chlorine, bromine, methyl, ethyl, propyl, trifluoromethyl, methoxy, difluoromethoxy or trifluoromethoxy,

Y represents hydrogen, chlorine, bromine, methoxy, methyl, ethyl, propyl, trifluoromethyl or trifluoromethoxy,

where only one of the radicals X and Y may represent trifluoromethyl, difluoromethoxy or trifluoromethoxy,

A represents C₁-C₆-alkyl,

G represents hydrogen (a) or represents one of the groups



in which

M represents oxygen or sulphur,

R¹ represents C₁-C₁₆-alkyl, C₂-C₁₆-alkenyl, C₁-C₆-alkoxy-C₁-C₆-alkyl, C₁-C₆-alkylthio-C₁-C₆-alkyl or poly-C₁-C₆-alkoxy-C₁-C₆-alkyl, each of which is optionally mono- to trisubstituted by fluorine or chlorine, or represents C₃-C₇-cycloalkyl which is optionally mono- or disubstituted by fluorine, chlorine, C₁-C₅-alkyl or C₁-C₅-alkoxy and in which optionally one or two not directly adjacent methylene groups are replaced by oxygen and/or sulphur,

represents phenyl which is optionally mono- to trisubstituted by fluorine, chlorine, bromine, cyano, nitro, C₁-C₄-alkyl, C₁-C₄-alkoxy, C₁-C₃-haloalkyl, C₁-C₃-haloalkoxy, C₁-C₄-alkylthio or C₁-C₄-alkylsulphonyl or represents thienyl,

R² represents C₁-C₁₆-alkyl, C₂-C₁₆-alkenyl, C₁-C₆-alkoxy-C₂-C₆-alkyl or poly-C₁-C₆-alkoxy-C₂-C₆-alkyl, each of which is optionally mono- to trisubstituted by fluorine or chlorine,

represents C₃-C₇-cycloalkyl which is optionally mono- or disubstituted by fluorine, chlorine, C₁-C₄-alkyl or C₁-C₄-alkoxy or

5 represents phenyl or benzyl, each of which is optionally mono- or disubstituted by fluorine, chlorine, bromine, cyano, nitro, C₁-C₄-alkyl, C₁-C₃-alkoxy, C₁-C₃-haloalkyl or C₁-C₃-haloalkoxy.

3. Compounds of the formula (I) according to Claim 1 in which

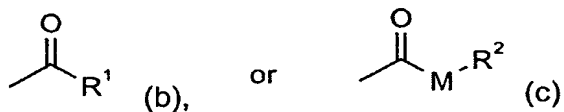
10 X represents chlorine, bromine, methyl, ethyl, methoxy, trifluoromethyl, trifluoromethoxy or difluoromethoxy,

Y represents chlorine, bromine, methyl, ethyl, propyl, methoxy, trifluoromethyl or trifluoromethoxy,

15 where only one of the radicals X and Y may represent trifluoromethyl, trifluoromethoxy or difluoromethoxy,

A represents C₁-C₄-alkyl,

20 G represents hydrogen (a) or represents one of the groups



in which

25

M represents oxygen or sulphur,

5 R¹ represents C₁-C₈-alkyl, C₂-C₈-alkenyl, C₁-C₂-alkoxy-C₁-C₂-alkyl, C₁-C₂-alkylthio-C₁-C₂-alkyl, each of which is optionally mono- to trisubstituted by fluorine or chlorine, or represents C₃-C₆-cycloalkyl which is optionally mono- or disubstituted by fluorine, chlorine, methyl or methoxy and in which optionally one methylene group is replaced by oxygen and/or sulphur,

10 represents phenyl which is optionally mono- or disubstituted by fluorine, chlorine, bromine, cyano, nitro, methyl, methoxy, trifluoromethyl or trifluoromethoxy or represents thienyl,

15 R² represents C₁-C₈-alkyl, C₂-C₈-alkenyl or C₁-C₄-alkoxy-C₂-C₃-alkyl, represents C₅-C₆-cycloalkyl, represents phenyl or benzyl, each of which is monosubstituted by fluorine, chlorine, cyano, nitro, methyl, methoxy, trifluoromethyl or trifluoromethoxy.

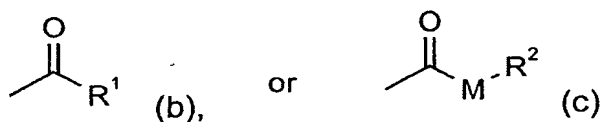
20 4. Compounds of the formula (I) according to Claim 1 in which

X represents chlorine, bromine, methyl or trifluoromethyl,

Y represents chlorine, bromine or methyl,

25 A represents methyl, ethyl, propyl, butyl or isobutyl,

G represents hydrogen (a) or represents one of the groups



in which

M represents oxygen or sulphur,

5 R¹ represents C₁-C₆-alkyl, C₂-C₆-alkenyl, C₁-C₂-alkoxy-C₁-C₂-alkyl, C₁-C₂-alkylthio-C₁-C₂-alkyl, represents cyclopropyl, cyclopentyl or cyclohexyl, each of which is optionally monosubstituted by fluorine, chlorine, methyl or methoxy,

10 represents phenyl which is optionally monosubstituted by fluorine, chlorine, bromine, cyano, nitro, methyl, methoxy, trifluoromethyl or trifluoromethoxy or represents thienyl,

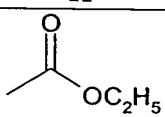
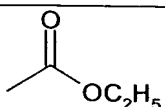
15 R² represents C₁-C₈-alkyl, C₂-C₆-alkenyl or C₁-C₃-alkoxy-C₂-C₃-alkyl,

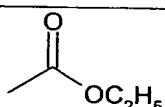
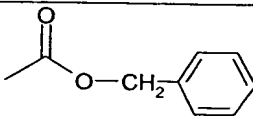
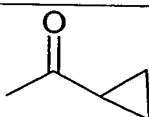
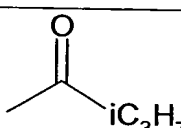
represents cyclopentyl or cyclohexyl

or represents phenyl or benzyl, each of which is optionally monosubstituted by fluorine, chlorine, cyano, nitro, methyl, methoxy, trifluoromethyl or trifluoromethoxy.

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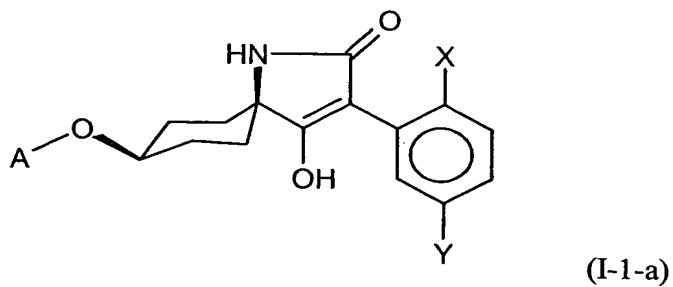
5. Compounds of the formula (I) according to Claim 1 in which the substituents have the meanings given in the table.

X	Y	A	G
CH ₃	CH ₃	CH ₃	H
Br	CH ₃	CH ₃	H
CH ₃	CH ₃	CH ₃	
Br	CH ₃	CH ₃	

X	Y	A	G
CH ₃	Br	CH ₃	
Br	CH ₃	CH ₃	
Br	CH ₃	CH ₃	
Cl	CH ₃	C ₂ H ₅	

6. Process for preparing compounds of the formula (I) according to Claim 1, characterized in that, to obtain

5 (A) compounds of the formula (I-1-a)

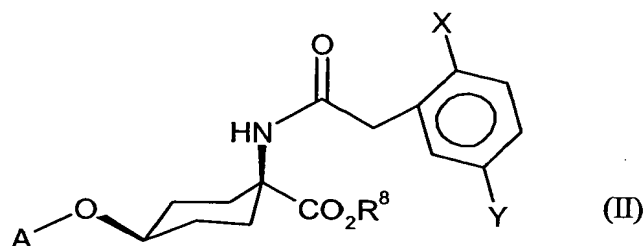


in which

10 A, X and Y are as defined above,

compounds of the formula (II)

- 121 -



in which

A, X and Y are as defined above

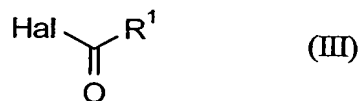
and

R^8 represents alkyl

are condensed intramolecularly in the presence of a diluent and in the presence of a base,

(B) compounds of the formula (I-b) shown above in which A, R^1 , X and Y are as defined above, compounds of the formula (I-a) shown above in which A, X and Y are as defined above are reacted

α) with acid halides of the formula (III)



in which

R^1 is as defined above and

Hal represents halogen

or

β) with carboxylic anhydrides of the formula (IV)



in which

10 R^1 is as defined above,

if appropriate in the presence of a diluent and if appropriate in the presence of an acid binder;

15 (C) compounds of the formula (I-c) shown above in which A, R^2 , M, X and Y are as defined above, compounds of the formula (I-a) shown above in which A, X and Y are as defined above are in each case reacted

with chloroformic esters or chloroformic thioesters of the formula (V)

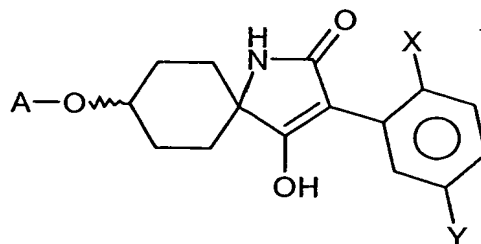


in which

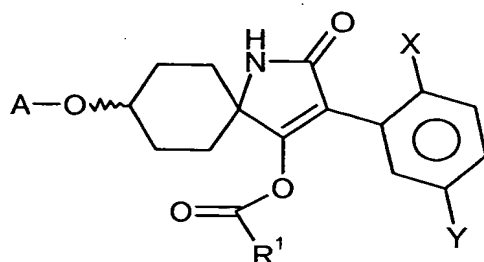
25 R^2 and M are as defined above,

if appropriate in the presence of a diluent and if appropriate in the presence of an acid binder;

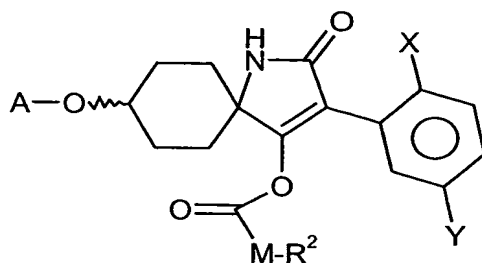
30 (D) compounds of the formulae (I-a) to (I-c) shown above, cis/trans isomer mixtures of the formulae (I-a') to (I-c')



(I-a')



(I-b')



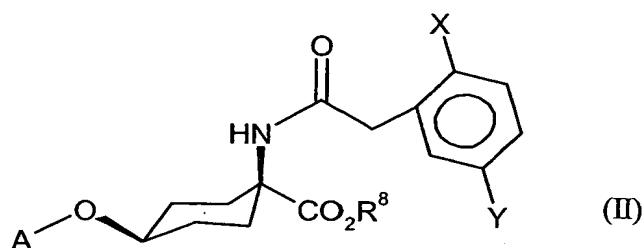
(I-c')

in which

A, X, Y, M, R¹ and R² are as defined above are separated using physical separation processes, such as, for example, by column chromatography or fractional crystallization,

(E) compounds of the formula (I-a), compounds of the formulae (I-b) or (I-c) in which A, M, X, Y, R¹ and R² are as defined above are hydrolysed, for example with aqueous bases, and then acidified.

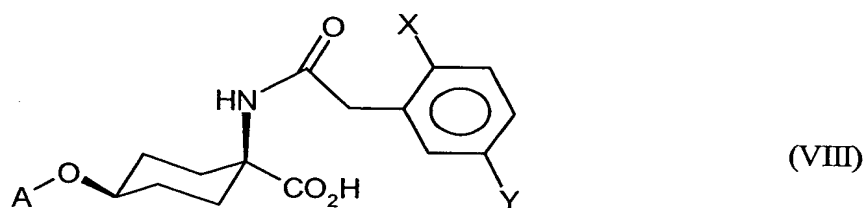
7. Compounds of the formula (II)



in which

5 A, X, Y and R⁸ are as defined above.

8. Compounds of the formula (VIII)



10

in which

A, X and Y are as defined above.

15 9. Pesticides, characterized in that they comprise at least one compound of the formula (I) according to Claim 1.

10. Method for controlling animal pests, characterized in that compounds of the formula (I) according to Claim 1 are allowed to act on pests and/or their habitat.

20

11. Use of compounds of the formula (I) according to Claim 1 for controlling animal pests.

12. Process for preparing pesticides, characterized in that formula (I) according to Claim 1 are mixed with extenders

5 13. Use of compounds of the formula (I) according to Claim 1 as pesticides.